## CLAIMS

1. A fuel injection system comprising;

an accumulator volume (10) arranged to be charged with fuel by means of a high pressure fuel pump (12) and for supplying fuel at a first injectable pressure level to a plurality of fuel injectors (22),

wherein each injector (22) includes a delivery passage (16, 20), a valve needle (30), which is engageable with a seating to control fuel injection, and a control valve (26) for controlling fuel pressure within a control chamber (28) so as to control movement of the valve needle (30), wherein the control valve (26) has a first operating position in which the control chamber (28) communicates with a low pressure drain and communication between the control chamber (28) and the delivery passage (16, 20) is prevented and a second operating position in which the control chamber (28) communicates with the delivery passage (16, 20) and communication between the control chamber (28) and the low pressure drain is prevented,

and wherein each injector (22) has an associated intensifier arrangement (34) for increasing the pressure of fuel to be supplied to the injector (22) to a second injectable pressure level and including intensifier control valve means (36), which is operable to determine whether fuel injected to the engine is at the first or second injectable pressure level.

2. A fuel injection system as claimed in Claim 1, wherein the intensifier arrangement (34) includes an intensifier piston (38) having a pressure control chamber (32; 42) and an intensifier chamber (40), wherein the intensifier control valve means (36) is operable to control fuel pressure within the pressure control chamber (32; 42) and, hence, to control fuel pressure within the intensifier chamber (40).

3. A fuel injection system as claimed in Claim 2, wherein the pressure control chamber (32) is defined at one end of the intensifier piston (38).

4. A fuel injection system as claimed in Claim 3 , wherein the intensifier piston (38) has a first surface area exposed to fuel pressure within the pressure control chamber (32) and a second surface area exposed to fuel pressure within the intensifier chamber (40), wherein the first surface area is greater than the second surface area, thereby to permit fuel pressure within the intensifier chamber (40) to be increased to the second injectable pressure level under the control of the intensifier control valve mean (36).

5. The fuel injection system as claimed in Claim 2, wherein the pressure control chamber is an intermediate chamber (42) of the intensifier arrangement (34), defined between opposing ends of the intensifier piston (38).

6. The fuel injection system as claimed in Claim 5, whereby fuel pressure within the intensifier chamber (40) is increased to the second injectable pressure level in circumstances in which fuel pressure within the intermediate chamber (42) is reduced to less than the first injectable pressure level.

7. The fuel injection system as claimed in any one of Claims 1 to 6, wherein the intensifier control valve means (36) includes a two-position valve member (136) having first and second operating positions, a first operating position in which the valve member (136) is engaged with a first valve seating (142) and disengaged from a second valve seating (144) and a second operating position in with the valve member (136) is disengaged from the first valve seating (142) and is engaged with the second valve seating (144).

8. The fuel injection system as claimed in Claim 7, wherein the valve member (136) is engageable with the second valve seating (144) to control communication between the delivery passage (16, 20) and the pressure control chamber (32; 42), whereby when the valve member (136) is engaged with the second valve seating (144) the delivery passage (16, 20) is unable to communicate with the pressure control chamber (32; 42) and when the valve member (136) is spaced away from the second valve seating (144) the delivery passage (16, 20) is able to communicate with the pressure control chamber (32; 42).

9. The fuel injection system as claimed in Claim 8, wherein the valve member (136) is engageable with the first valve seating (142) to control communication between the pressure control chamber (32; 42) and a low pressure drain (168), whereby when the valve member (136) is engaged with the first valve seating (142) the pressure control chamber (32; 42) is unable to communicate with the low pressure drain (168) and when the valve member (136) is spaced away from the first valve seating (142) the pressure control chamber (32; 42) is able to communicate with the low pressure drain (138), and whereby in both the first and second operating

positions of the valve member (136) the delivery passage (16, 20) is unable to communicate with the low pressure drain (168).

10. The fuel injection system as claimed in any one of Claims 7 to 9, wherein the second valve seating (144) is of frusto-conical form.

11. The fuel injection system as claimed in any one of Claims 7 to 10, wherein the valve member (136) is axially aligned with the intensifier piston (38).

12. The fuel injection system as claimed in any one of Claims 1 to 11, including a non-return valve (18) arranged within a high pressure supply passage (16) through which fuel is supplied from the accumulator volume (10) to the delivery passage (20) of the injector (22).

13. The fuel injection system as claimed in any one of Claims 1 to 12, wherein the intensifier arrangement (34) is arranged within a common housing (50, 52, 54) with the associated injector.

14. The fuel injection system as claimed in Claim 13, wherein the common housing is formed from two or more separate housing parts (50, 52, 54).

15. The fuel injection system as claimed in any one of Claims 1 to 14, whereby the accumulator volume (10) is charged with fuel at a first pressure level of around 300 bar, in use.

16. The fuel injection system as claimed in any of Claims 1 to 15, whereby the intensifier arrangement (34) is arranged so as to provide fuel at a second pressure level in excess of 2000 bar.